Tourette syndrome and associated comorbidities

Tics are very common extra movements. They often affect the face, head and neck and result in excessive blinking, eye movements, nose, movements, neck movements and shoulder movements. Sometimes there are more complex body, limb movements such as jumping, twirling etc. Tics are seen stereotypically (meaning the same tic over and over) although over time, tics evolve and change. Vocal tics are noises such as throat clearing, or vocalisations.

Treatment:
The decision to treat tics is dependent on the level of impairment, meaning the level of problems they cause the child. Most of the time, maybe 80% of the time, no treatment is needed, as impairment is low or they are not troublesome enough to justify treatment (treatment only reduces tics by 30-50% on average).

If needed, treatment includes:

- *Comprehensive behavioural intervention for tics (CBIT),* delivered by a psychologist.
- *Clonidine:* this is a medication, typically starting at night (50microg) and introducing a morning dose and sometimes lunchtime dose. The normal dose is 25-50 microg in the morning, and 50-100 microg in the evening. Tiredness and sedation is the main side effect although this typically improves over time.
- *Risperidone and aripiprazole:* these should be reserved for the more severely affected patients, but are more effective. They have more side effects with appetite increase and weight gain being the most common. Normal start dose of risperidone is 0.25-0.5mg at night, normal dose is 0.25-0.5 in morning, and 0.25-1mg at night depending on age, severity and tolerance. Aripiprazole start is 2.5mg in the morning, normal dose is 5-10mg once per day.

<u>One of the most important things to do is determine if there is comorbidity</u>:

Attention deficit disorder affects about 40% of kids with Tourette. If impairing (impaired attention, concentration, distractibility) which affects day-to- day life and school life, then treatment may be warranted.

The stimulants are the most effective, and Ritalin has the best evidence. Ritalin can increase tics in some children but is usually well tolerated. Appetite reduction and mood change are sometimes seen, but ritalin can be highly effective and rewarding treatment. The dose is often Ritalin short acting 5mg twice per day increasing to 10-20mg twice per day depending on age. Longer acting preparations (Ritalin LA, Concerta) are good other options if Ritalin works. Clonidine also helps ADHD to some degree.

Obsessive compulsive disorder is repetitive and impairing intrusive worry thoughts (obsessions) and actions (compulsions) such as checking, worries about safety. Obsessive compulsive symptoms become a disorder when they affect function (use excessive time, cause distress etc). The treatment is psychological (therapist), preferably from a clinical psychologist familiar with working with children with OCD. The most common treatment is called exposure response therapy. If psychology is inadequate or if the problem is too significant, medications such as SSRI (sertraline, fluoxetine, fluvoxamine), or occasionally anti-psychotics (risperidone) are needed. The SSRI are usually well tolerated and have a good safety profile, although 1 in 20 people will have a negative paradoxical response and become miserable and agitated.

Other anxiety disorders are also common (generalized or separation anxiety) and the treatment is psychological and similar to that for OCD. Emotional lability and emotional regulation problems are also common. Oppositional defiant disorder and conduct disorder are less common and often associate with ADHD.

For more information, see the accompanying paper on tics and Tourette syndrome.